

# ABSTRACT

The invention relates to a rubber composition for a tire tread simultaneously establishing a high wear resistance and a low heat buildup, and more particularly to a rubber composition for a tire tread comprising 10-250 parts by weight of a carbon black per 100 parts by weight of a rubber component, in which said carbon black is produced in a carbon black production step satisfying the following relational equations (1) and (2):

$$2.00 \leq \alpha \leq 9.00 \dots (1)$$

$$-2.5 \times \alpha + 85.0 \leq \beta \leq 90.0 \dots (2)$$

- 10 when a residence time from the introduction of the starting hydrocarbon into the high-temperature combustion gas flow to the introduction of the quenching medium is  $t_1$  (sec), an average reaction temperature for such a time is  $T_1$  ( $^{\circ}\text{C}$ ), a residence time from the introduction of the quenching medium to the enter of a reaction gas flow into the reaction stop zone is  $t_2$  (sec), an average reaction
- 15 temperature for such a time is  $T_2$  ( $^{\circ}\text{C}$ ),  $\alpha = t_1 \times T_1$  and  $\beta = t_2 \times T_2$ .